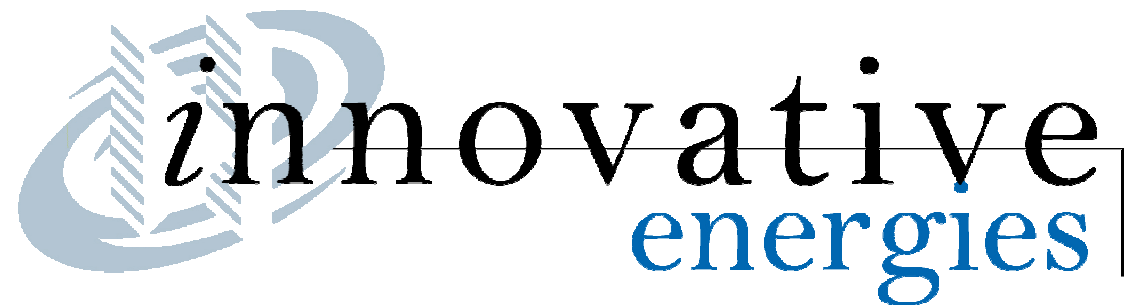




Global Solutions Personal Focus

#### TERMS OF WARRANTY

Innovative Energies Ltd warrants its power supplies for 24 months (two years) from date of shipment against material and workmanship defects.

Innovative Energies' liability under this warranty is limited to the replacement or repair of the defective product as long as the product has not been damaged through misapplication, negligence, or unauthorized modification or repair.

#### Innovative Energies Limited

Phone: +64 9 835 0700  
Freephone: 0800 654 668 (New Zealand)  
1800 148 494 (Australia)

Fax: +64 9 837 3446

Email: info@innovative.co.nz

Online: www.innovative.co.nz

In Person: 1 Heremai Street, Henderson, Auckland, New Zealand

By Post: PO Box 19-501, Auckland 1746, New Zealand



## User manual

**ELS250-24-1/ CAB150/ SN ....S,TR**

**SR250... DC power supply/chargers in cabinet or 19" rack**



24 month warranty  
(not incl. batteries)

## Safety

The user is responsible for ensuring that input and output wiring segregation complies with local standards and that in the use of the equipment, access is confined to operators and service personnel. A low resistance earth connection is essential to ensure safety and additionally, satisfactory EMI suppression (see below).

**HAZARDOUS VOLTAGES EXIST WITHIN A POWER SUPPLY ENCLOSURE AND ANY REPAIRS MUST BE CARRIED OUT BY A QUALIFIED SERVICEPERSON.**

## Electrical Strength Tests

Components within the power supply responsible for providing the safety barrier between input and output are constructed to provide electrical isolation as required by the relevant standard. However EMI filtering components could be damaged as result of excessively long high voltage tests between input, output and ground. Please contact our technicians for advice regarding electric strength tests.

## Earth Leakage

The EMI suppression circuits causes earth leakage currents which may be to the maximum allowable of 3.5mA.

## Ventilation

High operating temperature is a major cause of power supply failures, for example it has been well documented that a 10°C rise in the operating temperature of a component will halve its expected life. Therefore always ensure that there is adequate ventilation for the equipment. Batteries and cooling fans also suffer shortened lifetimes if subjected to high ambient temperatures - both should be included in a routine maintenance schedule to check for signs of reduced efficiency.

## Water / Dust

Every effort must be made in the installation to minimise the risk of ingress of water or dust. Water will almost always cause instant failure. The effects of dust are slower in causing failure of electronic equipment but all electrical equipment should be cleaned free of any dust accumulation at regular intervals.

## Electromagnetic Interference (EMI)

Switching power supplies and converters inherently generate electrical noise. All wiring should be as short as practicable and segregated from all equipment wiring which is sensitive to EMI. Residual noise can be reduced by looping DC wiring through ferrite cable sleeves. These are most effective as close to the power supply as possible and as many turns of the wire taken through the core (+ and - in the same direction) as the core will accommodate.

## Fuse ratings

Check that the wiring and fuses or MCBs match the rating of the PSU or converter. Note that the Innovative Energies *No-Break™* DC chargers are able to deliver up to 2.5 times the rated current when mains power is on.

## Connection polarity

It is critical to check the polarity carefully when connecting DC devices. Some Innovative Energies models have reverse polarity protection (RPP), for example, the *Smartchargers* have electronic (non-destructive) RPP, the *No-Break™* DC range has an internal fuse which needs to be replaced if the battery is connected in reverse. Usually, however, a reverse polarity connection results in instant destruction of the device, especially if there is a battery involved.

## Glossary of terms used in our user manuals

**PSU** = power supply unit

**BCT** = battery condition test

**ECB** = electronic circuit breaker

**ELVD** = electronic low voltage disconnect

**RPP** = reverse polarity protection

**EMI** = electromagnetic interference

**SNMP** = Simple Network Management Protocol

**LAN** = local area network



16 x 1A fused outlets, fuses front accessible

- **SR250 DC Power Supply in 2U rack**
- **16 sets of individual load output terminals (available on the rear)**
- **Includes internal tray and wiring for 2 x 7Ah sealed lead acid batteries**
- **Remove Batteries on tray easily via front panel (remove 4 screws)**
- **Removable fuses available from front panel for easy access**
- **ISO9001 certified quality management system**
- **Batteries supplied separately**

## ♦ 24 Month Warranty

**SPECIFICATIONS** All specifications are typical at nominal input, full load and at 20°C unless otherwise stated.

| ELECTRICAL                   |                                                                    | PHYSICAL                  |                                                                             |
|------------------------------|--------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------|
| <b>AC Input</b>              | 180~264VAC (standard)<br>80~132VAC (optional)                      | <b>AC Input connector</b> | IEC320 input socket , 1.5m mains lead supplied                              |
| <b>Input Fusing</b>          | AC input fuse                                                      | <b>Output Connectors</b>  | 16 sets of 2 way 2.5mm <sup>2</sup><br>Screw/ Clamp terminal blocks at back |
| <b>Output Fusing</b>         | Up to 16 fuses may be fitted                                       | <b>Enclosure</b>          | 2U x 19" rack                                                               |
| <b>Isolation</b>             | 1KV DC input- output / earth                                       | <b>Weight</b>             | 5kg without batteries                                                       |
| <b>Output Power</b>          | 250W                                                               | <b>Dimensions</b>         | 2U x 19" X 340mm deep                                                       |
| <b>Output Voltage</b>        | 13.8, 27.6, 41.4, 55.2V                                            |                           |                                                                             |
| <b>Indication</b>            | 16 LEDS on front panel<br>(Green: output OK)<br>(Red : fuse blown) |                           |                                                                             |
| ENVIRONMENTAL                |                                                                    | TYPICAL MODEL CODE        |                                                                             |
| <b>Operating temperature</b> | 0°C to 50°C, max. 60°C at 50% load                                 | <b>SN27/09TR-16</b>       | Uses SR250C24TFXL <i>No-Break™</i> DC PSU/ charger                          |
| <b>Storage temperature</b>   | -10 to 70 °C ambient                                               |                           |                                                                             |
| <b>Humidity</b>              | 0 - 95% relative humidity non-condensing                           |                           |                                                                             |
| STANDARDS                    |                                                                    |                           |                                                                             |
| <b>Safety</b>                | To IEC950 / EN60950                                                |                           |                                                                             |

**SN27/09TR-16**  
Charging voltage temperature compensated



Internal battery tray for 2 x 7Ah

Individual output terminals

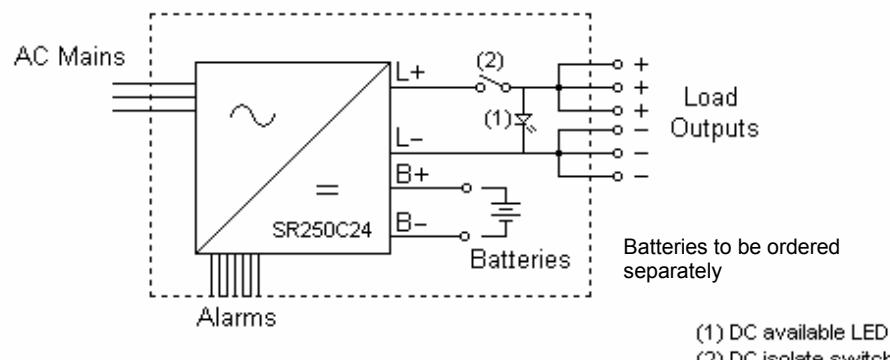


SN27/10SA shown, includes distribution terminals

♦ 24 Month Warranty

**SPECIFICATIONS** All specifications are typical at nominal input, full load and at 20°C unless otherwise stated.

| ELECTRICAL          |                                                | PHYSICAL             |                                                                                 |
|---------------------|------------------------------------------------|----------------------|---------------------------------------------------------------------------------|
| Input               | 180~264VAC, 200~375VDC<br>80~132VAC (optional) | AC Input connector   | 1.5m long with Australasian 3 pin plug                                          |
| Fusing / Protection | Internal input fuse                            | DC Connections       | Screw type terminal block                                                       |
| Isolation           | 1KV DC input - output / earth                  | Enclosure            | White powder coated steel enclosure with lockable door (lock & 2 keys included) |
| Output Power        | 250W                                           | Indicators & control | Power supply dependent                                                          |
| Output Voltage      | 13.8, 27.6, 41.4, 55.2V                        | Alarm outputs        | Power supply dependent                                                          |
|                     |                                                | Dimensions (mm)      | 335Hx 313W x 133 D                                                              |
|                     |                                                | Weight (approx)      | 5.3 kg excluding batteries                                                      |

| TYPICAL CONNECTION DIAGRAM                                                                                                               | ADDITIONAL NOTES                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>(1) DC available LED<br/>(2) DC isolate switch</p> | <p>The models listed below use the SR250... <i>No-Break</i>™ DC power supplies but any SR250 unit may be fitted into this enclosure.</p> <p>Enclosure only: <b>RMWCASECU/1</b><br/>+Cam lock <b>RHWCAMINTKX1</b></p> |

| TYPICAL MODEL TABLE |                     |                        |                   |                   |                   |
|---------------------|---------------------|------------------------|-------------------|-------------------|-------------------|
| CODES               | DC Output           |                        |                   |                   | Power Supply Used |
|                     | Output Voltage Load | Output Voltage Charger | Peak Load Current | PSU Rated Current |                   |
| SN12/20S            | 13.8V               | 13.8V                  | 27A               | 18A               | SR250C12TFSL      |
| SN27/10SA           | 27.6V               | 27.6V                  | 13A               | 9.0A              | SR250C24TXL       |

**For full information on the power supply/charger used please refer to its specific user manual.**



#### FUNCTION

Cabinet containing battery charger, batteries and controls for emergency lighting system.

#### SPECIFICATIONS FOR ELS250-24-1

|                              |                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Charger:</b>              | SR250D24XL with special microprocessor (see below)                                                        |
| <b>Input:</b>                | 180~264VAC                                                                                                |
| <b>Output:</b>               | 27.6V, 9A, 250W                                                                                           |
| <b>Load Outputs:</b>         | 4 pairs x 10Amp MCBs                                                                                      |
| <b>Indication:</b>           | Mains ON, Charger ON, Charger current, Battery Voltage                                                    |
| <b>Control:</b>              | Test switch pushbutton - activates timer and turns on lights for preset time set by timer T1 (adjustable) |
| <b>Alarm Outputs:</b>        | Battery Low<br>Mains Fail (used to activate Emergency Lighting System)                                    |
| <b>Microprocessor:</b>       | SFMCT-OA v1.1 (battery low alarm activates when mains power is on or off)                                 |
| <b>Battery Operation:</b>    | Automatic when the AC mains fail                                                                          |
| <b>Battery:</b>              | 2 x 12Vdc, 100Ah                                                                                          |
| <b>Anti-Tamper Switch:</b>   | Contacts rated 250VAC, 20A                                                                                |
| <b>Battery MCB:</b>          | 20A                                                                                                       |
| <b>Enclosure Dimensions:</b> | 1255H x 500W x 250D mm overall                                                                            |
| <b>Battery Compartments:</b> | 330H x 440W x 200D (internal dimensions)                                                                  |



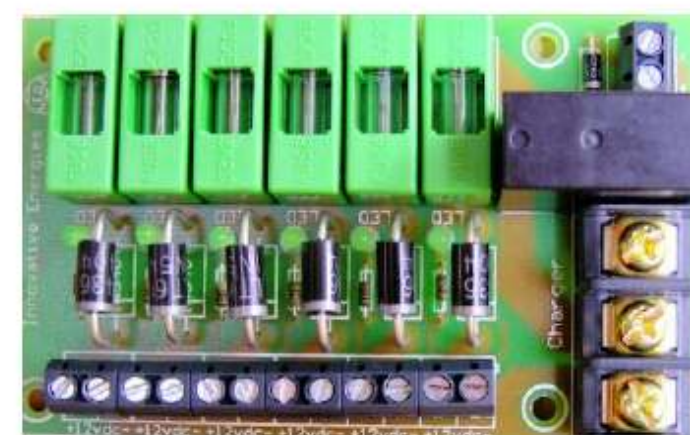
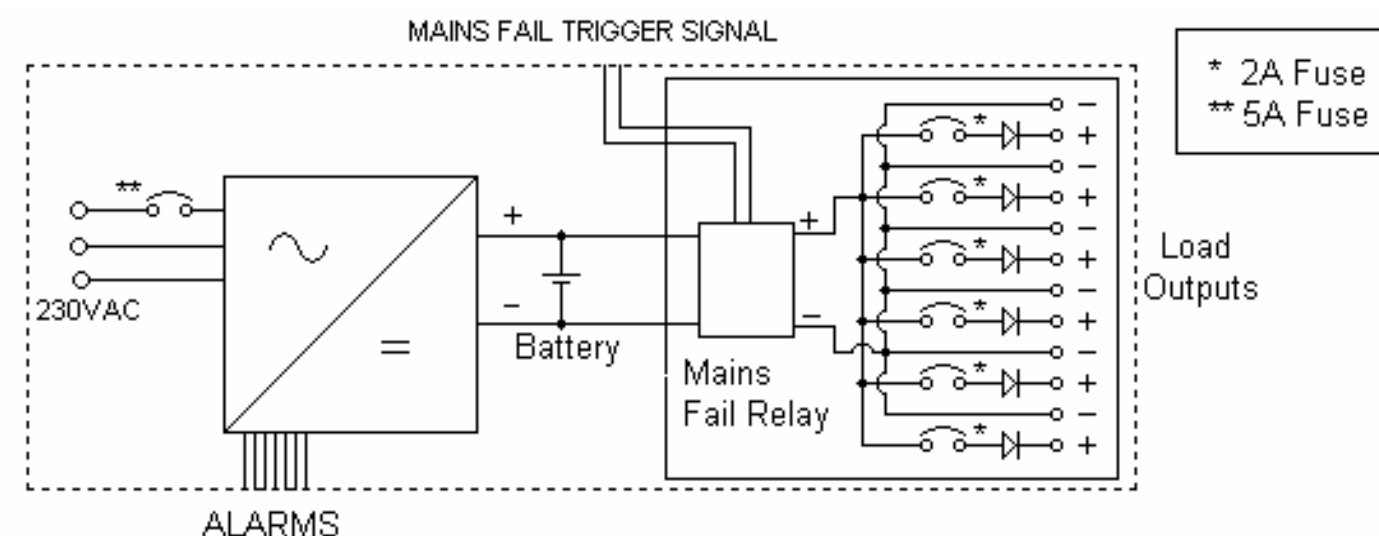
**Dimensions:** 500H x 495W x 245mm

#### CAB 150 DESCRIPTION

CAB150 comprises of a **SR250E12TFSL** boost charger, housed in a security cabinet with the back up battery in the bottom of the cabinet.

Originally designed for use on closed circuit TV and security alarm systems on bank premises but may be used in any situation requiring secure uninterruptible DC power.

A boost charger is used to ensure fast recharging of the battery after a mains power failure.



#### INPUT SELECTION DEPENDING ON INPUT TRIGGER

- \* Normally Close (N/C)
- \* Normally Open (N/O)
- NEG INPUT
- POS INPUT FROM CHARGER